

What is claimed is:

1. A method for selling fuel to a vehicle, wherein the method comprises the steps of:
 storing vehicle specific data in the vehicle;
 transmitting said data from the vehicle to a fuel pump computer; and
 determining, at least partially, by said fuel pump computer, a per unit price of
 the fuel sold to said vehicle, using said data.
2. The method of claim 1, wherein the data comprises a value indicative of how far the
 vehicle is capable of going on a unit of fuel.
3. The method of claim 1, wherein the data comprises a value indicative of the weight of
 the vehicle.
4. The method of claim 1, wherein the data comprises a value indicative of the amount
 of at least one chemical composition emitted by the vehicle.
5. The method of claim 1, wherein the data comprises a vehicle identification number.
6. The method of claim 1, wherein the data comprises an indicator that the vehicle is
 capable of using fuel which is at least partially comprised of a renewable resource.
7. The method of claim 1, wherein the data comprises an indicator that the vehicle is a
 hybrid gasoline/electric vehicle.
8. The method of claim 1, wherein the step of determining a per unit price of fuel sold to
 said vehicle further comprises searching a lookup table for vehicle specific data in order to
 determine a per unit price for fuel for the vehicle.

1 9. The method of claim 1, wherein the step of determining a per unit price of fuel sold to
2 said vehicle further comprises use of an equation which utilizes said vehicle specific data to
3 at least partially determine the per unit price for the fuel sold to the vehicle.

1 10. The method of claim 1, wherein the step of determining a per unit price of fuel sold to
2 said vehicle further comprises the use of a database query which utilizes said vehicle specific
3 data to at least partially determine the per unit price for the fuel sold to the vehicle.

1 11. The method of claim 1, wherein the step of transmitting said data uses wireless
2 means.

1 12. The method of claim 11, further comprising a step of periodically verifying that the
2 fuel being delivered is being pumped into the vehicle from which the vehicle specific data was
3 used to determine the per unit price.

1 13. The method of claim 12, further comprising a step wherein a computer in the vehicle
2 receives information on fuel level in a fuel tank in the vehicle and periodically transmits said
3 fuel level or a rate of change of said fuel level to the fuel pump computer; said fuel pump
4 computer using said transmitted fuel level or said rate of change of fuel level to verify that the
5 per unit price is correct for the vehicle being fueled.

1 14. The method of claim 1, wherein the step of transmitting said data from the vehicle is
2 by means of an electrical coupling comprising a signaling cable, a plug at an end of the
3 signaling cable, and a jack on the vehicle to be fueled; said jack being electrically coupled to a
4 device containing said data in the vehicle.

1 15. The method of claim 1, wherein the step of transmitting said data from the vehicle is
2 by means of a magnetic transducer placed on a portion of a nozzle which is inserted into a
3 fuel filler pipe on the vehicle; said magnetic transducer reading the vehicle data from one or
4 more encoded magnetic strips situated in a portion of the fuel filler pipe through which the
5 magnetic transducer passes; and wherein said data received by the fuel pump computer
6 travels over a signaling cable between said magnetic transducer and said fuel pump computer.

1 16. The method of claim 15, further comprising a step wherein if fueling is suspended for
2 a predetermined time, said nozzle must be reinserted past said encoded magnetic strips in
3 order to resume receiving fuel at the determined per unit price.

1 17. The method of claim 1, wherein the step of transmitting said data from the vehicle is
2 done by optically reading a bar code; said bar code being physically located inside the fuel
3 filler pipe and read by a light source and a light receptor on the fuel nozzle; and wherein said
4 data travels via a signaling cable between said light receptor and said fuel pump computer.

1 18. The method of claim 1, wherein the step of transmitting said data from said vehicle is
2 by means of infrared data transmission sent from a sending unit on the vehicle to a receiving
3 unit on the fuel nozzle.

1 19. The method of claim 1, further comprising the step of displaying to the customer the
2 per unit fuel price.

1 20. The method of claim 19, further comprising the step of displaying an explanation of
2 how the per unit fuel price was determined.

1 21. The method of claim 1, wherein the step of storing said vehicle specific data is
2 performed under the direction of a regulatory agency after the vehicle has been purchased by
3 the customer.

1 22. An apparatus for selling fuel to a vehicle, comprising:
2 a storage device for storing vehicle specific data within said vehicle;
3 a transmitter for transmitting said data to a fuel vendor; and
4 a fuel pump computer, which determines a per unit price for the fuel, using,
5 at least in part, said data.

1 23. The apparatus of claim 22, wherein the storage device is a semiconductor memory.

1 24. The apparatus of claim 22, wherein the storage device is comprised of magnetic
2 material.

1 25. The apparatus of claim 24, wherein the magnetic material is positioned inside a fuel
2 filler pipe on said vehicle, and is of a substantially cylindrical or partially cylindrical shape.

1 26. The apparatus of claim 25, further comprising a substantially cylindrical or partially
2 cylindrical collar positioned and affixed between said magnetic material and the inside wall of
3 said fuel filler pipe; said collar being made of a nonferrous material and of suitable thickness
4 to prevent shunting of magnetic fields of said magnetic material by said fuel filler pipe.

1 27. The apparatus of claim 26, further comprising a magnetic transducer affixed to a fuel
2 nozzle; said transducer capable of reading information encoded upon said magnetic material
3 as said nozzle is inserted into said fuel filler pipe and past the magnetic material.

1 28. The apparatus of claim 22, wherein the storage device is an optically readable bar
2 code.

1 29. The apparatus of claim 28, wherein the bar code is printed, engraved, or painted on
2 the inside wall of a fuel filler pipe on said vehicle.

1 30. The apparatus of claim 29, further comprising a light source and a light receptor on a
2 fuel nozzle; said light source capable of illuminating said bar code, and said receptor capable
3 of detecting and reading said bar code as said nozzle passes the bar code as said nozzle is
4 inserted into said fuel filler pipe.

1 31. The apparatus of claim 28, wherein the bar code is printed, engraved, or painted on a
2 substantially cylindrical or partially cylindrical collar which is positioned and affixed inside a
3 fuel filler pipe on said vehicle.

1 32. The apparatus of claim 31, further comprising a light source and a light receptor on a
2 fuel nozzle; said light source capable of illuminating said bar code, and said receptor capable
3 of detecting and reading said bar code as said nozzle passes the bar code as said nozzle is
4 inserted into said fuel filler pipe.

1 33. The apparatus of claim 22, wherein said transmitter is wireless.

1 34. The apparatus of claim 33, further comprising a fuel sensor in the vehicle; a computer
2 in the vehicle which is electrically coupled to and which periodically reads fuel quantity
3 information from said fuel sensor; said computer in the vehicle further being coupled to a
4 wireless interface unit which controls a first wireless unit in said vehicle; said first wireless
5 unit being in communication with a second wireless unit on a fuel pump; said second wireless
6 unit being electrically coupled to said fuel pump computer; said fuel quantity information

7 transmitted from said computer in the vehicle through said wireless interface unit to said first
8 wireless unit, and from said first wireless unit to said second wireless unit, and from said
9 second wireless unit to said fuel pump computer.

1 35. The apparatus of claim 22, wherein the transmitter comprises an infrared transmitter
2 on said vehicle and an infrared receptor attached to a fuel pump nozzle.

1 36. The apparatus of claim 22, wherein said fuel pump computer contains a program in a
2 memory; said program, when executed by said fuel pump computer, being capable of
3 determining a per unit price of fuel sold to the vehicle, using some or all of said vehicle
4 specific data, and at least one rule authorized by a regulatory agency.